Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_\_\_

HW 18: Linear Functions

**Honors Geometry**

1. Graph the set of ordered pairs Determine whether the relationship is a linear function. Explain how you know.
2. You can make 5 gallons of liquid fertilizer by mixing 8 teaspoons of powdered fertilizer with water. Represent the relationship between the teaspoons of powder used and the gallons of fertilizer made using a table, an equation, and a graph.
3. Determine what car repair shop will give you the best deal to fix your car.

# FIX-IT-UP REPAIR

Bring your vehicle in today! We know how to fix ‘em all! The parts for new brakes will be $130 and we charge just $52 per hour for labor. You won’t regret choosing FIX-IT-UP because we’re the experts around town!

## Brakes ‘N More

Best deal in all of Chicago. We won’t break your pocketbook! You can get the parts for your new brakes for only $70 and we only charge $65 per hour for labor! Come on in and we’ll even serve you coffee while you wait!

1. Create a table to show the cost of each company when using the following number of labor hours: 0, 2, 4, 6, 8. Then, determine the linear equation to represent the relationship.
2. Graph the two lines (make YOUR OWN scale – remember, labor hours should be on the x-axis, and cost on the y-axis. The interval must be the same!):
3. What is the approximate number of labor hours for which both car repair shops charge the same amount?
4. What shop would be a better deal if your car only requires 2 labor hours? Explain your reasoning.
5. What shop would be a better deal if your car requires 10 labor hours? Explain your reasoning.